REMARKS

Careful review and examination of the subject application are noted and appreciated.

SUPPORT FOR CLAIM AMENDMENTS

Support for claim amendments can be found in claim 1. No new matter has been added.

CLAIM REJECTIONS UNDER 35 U.S.C. §102(b)

The rejection of claims 1-5 and 23 under 35 U.S.C. §102(b) as being anticipated by Yifrach '320 has been obviated by appropriate amendment in part and is respectfully traversed in part and should be withdrawn.

Yifrach discloses a TV receiver and buffer system therefor (Title). In contrast, claim 1 provides pausing a real-time frame during a transition from a real-time mode to a time-shifted mode. Yifrach appears to be silent regarding pausing a frame during a transition between modes. In particular, column 5, lines 10-11 of Yifrach state that a viewer "continues to see the broadcast in a real-time manner" when freezing a frame in a RAM 30. Yifrach discloses freezing the broadcast frames in the RAM 30 without transitioning out of a normal-viewing mode. Furthermore, Yifrach appears to be silent on freezing a broadcast frame during

a transition from the normal-viewing mode to a playback mode or a delayed-viewing mode. Therefore, Yifrach does not appear to disclose or suggest pausing a real-time frame during a transition from a real-time mode to a time-shifted mode as presently claimed. As such, the claimed invention is fully patentable over the cited reference and the rejection should be withdrawn.

Claims 20, 21, 22 and 23 have been amended to incorporate language similar to claim 1 and thus are also fully patentable over the cited reference. Since claim 1 has not been changed by the instant amendment, the language moved from claim 1 into claims 20, 21, 22 and 23 is known to the Examiner and thus does not raise any new issues. As such, the amendments to claims 20, 21, 22 and 23 appear to place the claims in a condition for allowance and should be entered. Furthermore, because the rejections of all independent claims are based on Yifrach alone, allowance of claim 1 should also result in the allowance of all claims.

Claim 2 provides that the transition is between the paused real-time frame and a time-shifted version of the paused real-time frame. Page 2, last paragraph of the Office Action asserts that Yifrach discloses a time-shifted frames from a cyclic storage device (CSD) 23. In contrast, column 5, lines 12-25 of Yifrach disclose that a transition from the normal-viewing mode to the playback mode causes frozen frames in the RAM 30 to be

presented in place of the broadcast frames. Therefore, the transition disclosed by Yifrach is from the real-time broadcast frames to the frozen frames stored in RAM 30 and **not from the "time-shifted" frames** stored in the CSD 23 as asserted by the Office Action. Thus, Yifrach does not appear to disclose or suggest a transition between a paused real-time frame and a time-shifted version of the paused real-time frame as presently claimed. As such, the claimed invention is fully patentable over the cited reference and the rejection should be withdrawn.

Claims 3-5 depended directly from independent claim 1 which is now believed to be allowable. As such, the claimed invention is fully patentable over the cited reference and the rejection should be withdrawn.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

The rejection of claims 6-10, 13-22 and 24 under 35 U.S.C. §103 as being unpatentable over Yifrach '320 has been obviated by appropriate amendment in part and is respectfully traversed in part and should be withdrawn.

The rejection of claim 11 under 35 U.S.C. §103 as being unpatentable over Yifrach '320 in view of Russo et al. '383 is respectfully traversed and should be withdrawn.

Claim 20 provides a decoder buffer configured to pause a frame of a first output, wherein the first output is viewable by an

analog display device. Assuming, *arguendo*, that the RAM 30 of Yifrach teaches the claimed decoder (for which Applicant's representative does not necessarily agree), the proposed modification still does not teach every claimed element. In particular, audio/video data presented by the RAM 30 of Yifrach is in a digitally compressed form and is therefore unviewable via a screen 15. An output signal of RAM 30 must be processed into another signal which may be viewed via the screen 15. Therefore, the proposed modification does not appear to teach or suggest a decoder configured to pause a frame of a first output, wherein the first output is viewable by an analog display device as presently claimed. Claims 21 and 22 provide similar language for a frame buffer configured to pause a frame. As such, the claimed invention is fully patentable over the cited reference and the rejection should be withdrawn.

Claim 20 provides a time-shifted decoder coupled to a frame storage system. Page 5, lines 5-6 of the Office Action assert that the D/A converter 25 of Yifrach corresponds to the claimed time-shifted decoder. All of the figures of Yifrach teach that the D/A converter 25 is coupled to a decompressor 24. Page 5, lines 15-19 of the Office Action assert that it would have been obvious to add a frame storage system to the system taught by Yifrach. However, the Office Action fails to make the claimed connection between the D/A converter 25 and the added frame storage

system. If the D/A converter 25 is left coupled to the decompressor 24, the proposed modified system does not teach or suggest a time-shifted decode coupled to a frame storage system as presently claimed. If the D/A converter 25 is coupled to the added frame storage system, no means would exist to convert the decompressed digital frames generated by the decompressor 24 into analog form for display on the screen 15. Therefore, the proposed modified system would appear to change the principle operation taught by Yifrach. Thus, the proposed modification (i) does not appear to teach or suggest a time-shifted decoder coupled to a frame storage system as presently claimed and, if modified to do so, (ii) improperly changes the principle operation of the reference. As such, the claimed invention is fully patentable over the cited reference and the rejection should be withdrawn. Claims 21 and 22 provide similar time-shifted decoder coupled to a frame storage system language and thus are also fully patentable over the cited reference and the rejection should be withdrawn.

Claim 22 provides a controller configured to receive a compressed digital video input. Page 5, lines 4-5 of the Office Action assert that the logic block 26 of Yifrach corresponds to the claimed controller. However, Yifrach appears to be silent regarding the logic block 26 receiving a compressed digital video input. Furthermore, no argument appear to be made in the Office Action that it would have been obvious for the logic block 26 of

Yifrach to receive a compressed digital video input. Therefore, the proposed modification does not appear to teach or suggest a controller configured to receive a compressed digital video input as presently claimed. As such, the pending claim is fully patentable over the cited reference and the rejection should be withdrawn.

Claim 24 provides that a transition from a real-time mode to a time-shifted mode is seamless to a viewer. In contrast, Yifrach appears to teach that a transition from a normal-viewing mode to a delayed-viewing mode will be apparent to a viewer. In particular, column 3, line 67 through column 4, line 11 of Yifrach discusses a transition from the normal-view mode to the delayed-view mode and concludes by stating that the viewer will see a change from a real-time frame to a 30-second old frame. The 30-second time jump does not appear to be a seamless transition since the display image will jump rapidly from one scene to another scene. The viewer will notice the transition. Therefore, the proposed modification does not appear to teach or suggest a transition from a real-time mode to a time-shifted mode is seamless to a viewer as presently claimed. As such, the claimed invention is fully patentable over the cited reference and the rejection should be withdrawn.

"[T]o establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation,

suggestion or teaching of the desirability of making the specific combination that was made by the applicants." *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000) (citing *In re Dance*, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998); *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984)). "[T]he factual inquiry whether to combine references must be thorough and searching." *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001). "This factual question ... [cannot] be resolved on subjective belief and unknown authority." *In re Lee*, 277 F.3d 1338, 1343-44, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002). "It must be based on objective evidence of record." *Id.* at 1343, 61 USPQ2d at 1434.

The Office Action fails to provide particular findings as to the reasons a skilled artisan, with no knowledge of the presently claimed invention, would have modified the cited reference as suggested in the Office Action. An assertion that modifying the prior art to meet the claimed invention would have been within the capabilities of one of ordinary skill in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason. The factual inquiry whether to modify the reference must be thorough and searching. The rigorous application of the requirement for showing the teaching or motivation to modify the reference is necessary to avoid the subtle

but powerful attraction of a hindsight-based obviousness analysis. It is improper, in determining whether a person of ordinary skill in the art would have made the proposed modifications, simply to use that which the inventor taught against its teacher. As such, because the Office Action fails to provide particular findings as to the reasons a skilled artisan, with no knowledge of the presently claimed invention, would have chosen the proposed modification the Office Action does not appear to have met the Office's burden of factually establishing a *prima facie* case of obviousness (MPEP §2142 and §2143.01).

Claims 20, 21, and 22 provide a frame storage system. The Office Action has not established a *prima facie* case of obviousness to add a frame storage system to the system of Yifrach. In particular, Yifrach teaches (i) a cyclic storage device (CSD) 23 for storing the most recent 30 seconds of frames and (ii) a RAM 30 for storing any user selected 30 seconds of frames copied from the CSD 23. Adding a frame storage system appears to be wasteful and thus non-obvious in light of the existing capability. The Office Action **does not appear to provide motivation** to add the cost, space, power consumption and heat of the frame storage system to the reference other than the addition could be done. However, the fact that the reference can be modified is not sufficient to establish *prima facie* obviousness (MPEP §2143.01). The Office Action appears to have used the claims as a template for

determining the proposed modifications. Therefore, a *prima facie* case has not been established that it would have been obvious to add a frame storage system to the system of Yifrach as presently claimed. As such, the claimed invention is fully patentable over the cited reference and the rejection should be withdrawn.

Claims 6-10 and 13-19 depend either directly or indirectly from independent claims 1, 21, 22 or 23 which are not believed to be allowable. As such, the claimed invention is fully patentable over the cited reference and the rejection should be withdrawn.

Accordingly, the present application is in condition for allowance. Early and favorable action by the Examiner is respectfully solicited.

The Examiner is respectfully invited to call the Applicant's representative at 586-498-0670 should it be deemed beneficial to further advance prosecution of the application.

If any additional fees are due, please charge Deposit Account No. 12-2252.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

20. (TWICE AMENDED) A set-top box comprising:

a real-time decoder configured to (i) generate a first output in response to a compressed digital video input signal and (ii) pause a frame of said first output during a transition from a first mode to a second mode,

a frame storage system configured to store said compressed digital video signal separately from said real-time decoder,

a time-shifted decoder (i) coupled to the frame storage system and (ii) configured to generate a second output in response to said stored compressed digital video signal, and

a controller configured to generate a command configured to control presenting (i) said first output when in [a] said first mode and (ii) said second output when in [a] said second mode, wherein said first output and said second output are viewable by a display device.

21. (TWICE AMENDED) A television receiver comprising:

a frame buffer configured to (i) present an output in response to an uncompressed video signal and (ii) pause a frame of said output during a transition from a first mode to a second mode,

a frame storage system configured to store said uncompressed video signal separately from said frame buffer,

a time-shifted decoder configured to generate a second output in response to said stored uncompressed video signal, and

a controller configured to generate a command configured to control presenting (i) said first output when in [a] said first mode and (ii) said second output when in [a] said second mode, wherein said first output and said second output are viewable by a display device.

22. (TWICE AMENDED) A set-top box comprising:

a controller configured to receive a command and a compressed digital video input,

a frame buffer configured to (i) generate a first output in response to the compressed digital video input and (ii) pause a frame of said first output during a transition from a first mode to a second mode,

a frame storage system coupled to the controller, and

a time-shifted decoder coupled to the frame storage system and the controller configured to generate a second output in response to (i) said compressed digital video input, and (ii) said command;

wherein the controller is configured to generate a second command configured to control presenting (i) said first output when in [a] said first mode and (ii) said second output when in [a] said second mode, wherein said first output and said second output are viewable by an analog display device.

23. (AMENDED) An apparatus comprising:

a frame buffer configured to (i) generate a first signal in response to a digital input signal and (ii) pause a real-time frame during a transition from a real-time mode to a time-shifted mode;

an encoder configured to generate a second signal in response to said digital input signal, wherein said second signal is (i) stored in a buffer and (ii) retrieved separate from being stored; and

a controller configured to present an output signal comprising (i) said first signal when in [a] said real-time mode and (ii) said retrieved second signal when in [a] said time-shifted mode.